

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P561211

Luminaire Tested: FSR-12-4-LD4-1STD-40-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561211
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-1STD-40-UNV-80-94-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

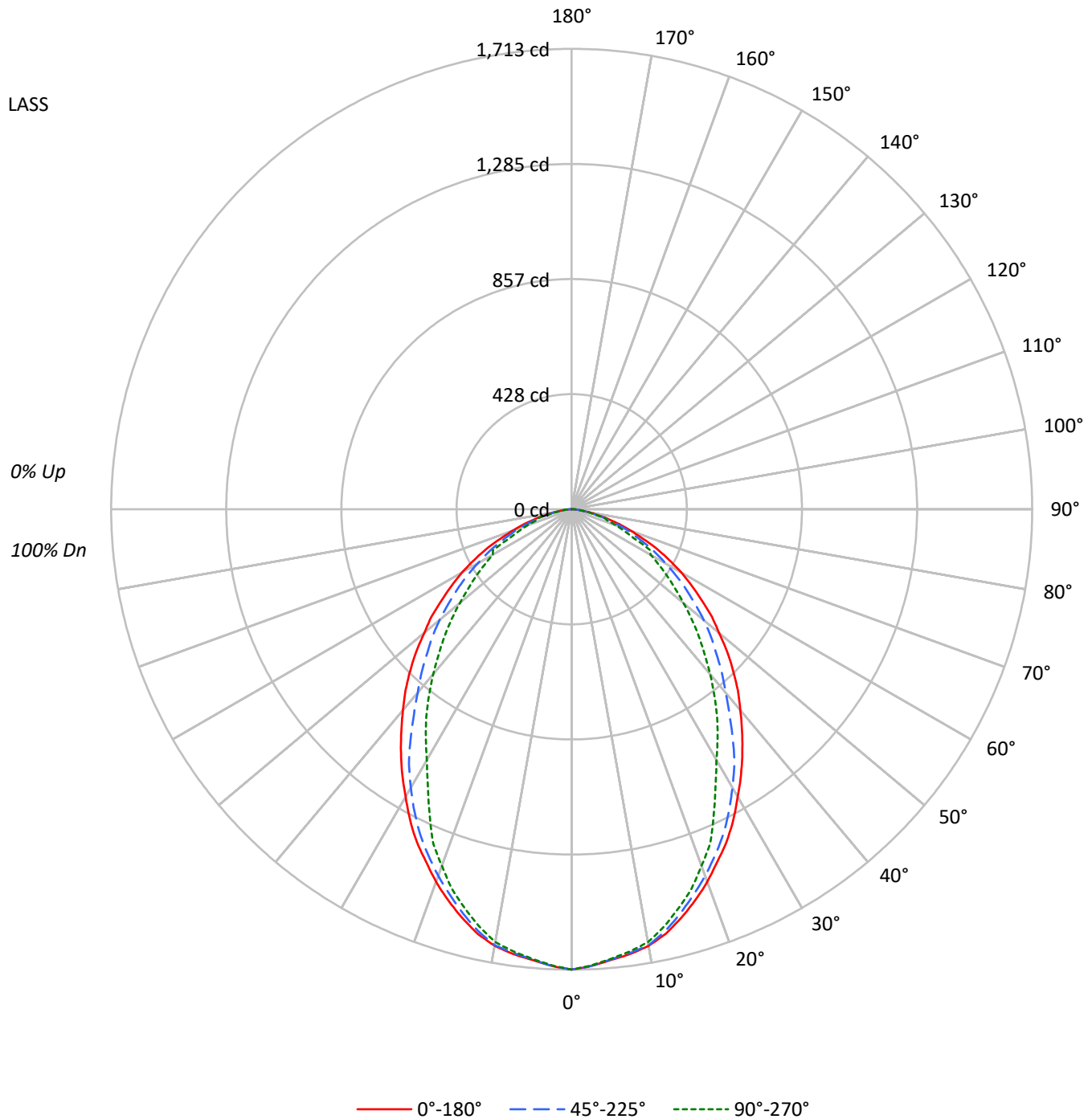
Lumens per Lamp: N/A
Luminaire Lumens: 3362.0 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P561211
CATALOG NUMBER: FSR-12-4-LD4-1STD-40-UNV-80-94-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P561211

CATALOG NUMBER: FSR-12-4-LD4-1STD-40-UNV-80-94-EDD

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4609	4609	4609
5°	4546	4541	4535
10°	4506	4501	4468
15°	4385	4341	4280
20°	4224	4156	4042
25°	4050	3962	3715
30°	3839	3716	3347
35°	3636	3434	3096
40°	3429	3130	2817
45°	3232	2893	2547
50°	2992	2686	2271
55°	2768	2434	2034
60°	2536	2174	1822
65°	2231	1904	1613
70°	1838	1666	1371
75°	1462	1276	1338
80°	982	921	859
85°	611	735	855

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3232 cd/sqm



TEST NUMBER: P561211

CATALOG NUMBER: FSR-12-4-LD4-1STD-40-UNV-80-94-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.4	4.7
10°-20°	437.5	13.0
20°-30°	605.7	18.0
30°-40°	645.9	19.2
40°-50°	589.2	17.5
50°-60°	461.6	13.7
60°-70°	300.8	8.9
70°-80°	133.3	4.0
80°-90°	28.6	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1202.6	35.8
0°-40°	1848.5	55.0
0°-60°	2899.3	86.2
0°-90°	3362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3362.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1713	1713	1713	1713	1713	
5°	1683	1681	1681	1679	1679	160
15°	1574	1574	1558	1542	1536	442
25°	1364	1356	1334	1287	1251	626
35°	1107	1099	1045	966	942	692
45°	849	832	760	697	669	654
55°	590	572	519	457	434	529
65°	350	331	299	305	253	345
75°	141	131	123	117	129	151
85°	20	22	24	26	28	27
90°	0	0	0	0	0	



TEST NUMBER: P561211

CATALOG NUMBER: FSR-12-4-LD4-1STD-40-UNV-80-94-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1712.6	1712.6	1712.6	1712.6	1712.6
2.5°	1700.7	1700.7	1700.7	1698.7	1698.7
5°	1682.9	1680.9	1680.9	1678.9	1678.9
7.5°	1669.0	1667.0	1665.0	1663.1	1659.1
10°	1649.2	1649.2	1647.2	1637.3	1635.3
12.5°	1617.5	1615.5	1607.6	1593.8	1589.8
15°	1574.0	1574.0	1558.1	1542.3	1536.4
17.5°	1526.5	1524.5	1504.7	1488.8	1480.9
20°	1475.0	1471.0	1451.2	1425.5	1411.6
22.5°	1417.6	1417.6	1393.8	1360.1	1346.3
25°	1364.1	1356.2	1334.4	1286.9	1251.3
27.5°	1302.7	1290.9	1267.1	1199.8	1158.2
30°	1235.4	1229.5	1195.8	1108.7	1077.0
32.5°	1172.1	1162.2	1126.5	1035.5	1009.7
35°	1106.7	1098.8	1045.4	966.2	942.4
37.5°	1041.4	1031.5	964.2	900.8	871.1
40°	976.1	964.2	890.9	833.5	801.8
42.5°	914.7	898.8	827.6	766.2	730.6
45°	849.3	831.5	760.3	696.9	669.2
47.5°	784.0	768.2	702.8	637.5	605.8
50°	714.7	700.9	641.5	576.1	542.5
52.5°	657.3	635.5	578.1	512.8	485.1
55°	590.0	572.2	518.7	457.3	433.6
57.5°	528.6	510.8	461.3	403.9	384.1
60°	471.2	445.5	403.9	354.4	338.6
62.5°	407.8	388.0	352.4	310.8	330.6
65°	350.4	330.6	299.0	304.9	253.4
67.5°	287.1	277.2	249.5	221.7	213.8
70°	233.6	221.7	211.8	182.1	174.2
72.5°	186.1	174.2	160.4	144.5	138.6
75°	140.6	130.7	122.7	116.8	128.7
77.5°	97.0	93.1	87.1	81.2	79.2
80°	63.4	61.4	59.4	57.4	55.4
82.5°	37.6	37.6	37.6	37.6	37.6
85°	19.8	21.8	23.8	25.7	27.7
87.5°	11.9	11.9	13.9	15.8	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)